

Title (en)
Printed wiring board and a method of manufacturing such printed wiring boards

Title (de)
Leiterplatte und Verfahren zur Herstellung solcher Leiterplatten

Title (fr)
Panneau à circuit imprimé et procédé de fabrication de tels panneaux à circuit imprimé

Publication
EP 0647090 B1 19990623 (EN)

Application
EP 94306405 A 19940831

Priority
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Abstract (en)
[origin: EP0647090A1] There are provided conductive bumps (34) arranged at predetermined positions penetrated through an insulating layer (32) during a press integration stage to ensure electrical and thermal conductivities between a wiring pattern and a conductive metal as well as electrical connections between the wiring patterns. More specifically, the sharp tip of the conductive bump (34) is subjected to plastic deformation to form the interconnections between the wiring patterns or between the wiring pattern and the conductive metal. Also provided is a method of manufacturing a printed wiring board. A synthetic resin sheet (32) is sandwiched by the surface on which conductive bumps (34) are formed into a laminate. The laminate is heated until the resin component of the synthetic resin sheet (32) being is in a plastic state or up to a temperature not lower than the glass transition temperature of that resin. At that time, the conductive bumps (34) are forced against the synthetic resin sheet (32) and are penetrated therethrough. This permits positive connections with a high accuracy without forming a through-hole. <IMAGE>

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IPC 8 full level
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CPC (source: EP KR US)
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Cited by
EP1194023A4; CN105393649A; US5873161A; EP0805614A4; CN100435604C; US7815441B2; US10426040B2; WO9804107A1; WO9742727A1; WO03103355A1; US7348662B2; US7745926B2; US7928560B2; USRE45146E

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